
Abstract

5

The present invention relates to a process for the preparation of polynucleotides, whereby under suitable usual conditions the free 5'-hydroxy group, whose terminal 3'-hydroxy group contains a usual protecting group, is reacted with a hydroxy group, derivatized in a previous 10 reaction step to a phosphite amidoester, phosphotriester or phosphonic acid ester, whereby said hydroxy group is a 3'-hydroxy function of a free or solid phase bound polynucleotide, or a solid phase bound hydroxy function.

Further the present invention relates to a kit for performing a process according to the 15 invention, which contains at least one or more selected oligonucleotides, having a free 5'-hydroxy group and a protected 3'-hydroxy group. Further on, the present invention relates to new oligonucleotides and their use as building blocks for the synthesis of polynucleotides in the process according to the invention.

20 Furthermore the present invention relates to the use of the process according to the invention or the use of the kits for the preparation of poly/oligonucleotides resp. polynucleotide libraries or nucleic acid chips.

25

30